



IDEM's Surface Water Quality Assessment Program

Watershed Monitoring Program

Program Objective

The objective of this program is to provide a comprehensive, unbiased assessment of all streams for their ability to support aquatic life and designated aquatic use. This is accomplished by the use of randomly selected sampling sites throughout the major river basins to assess and characterize the overall water quality and biological integrity. Site selection is conducted by the National Health and Environmental Effects Research Laboratory (NHEERL) in Corvallis Oregon and focuses on all streams within the targeted river basins. Sampling for water chemistry is performed under different flow regimes during three distinct time frames from May to October. These sample event periods are May through June, July through August, and September through October. Fish community assessments, macroinvertebrate community assessments, fish tissue contaminant monitoring, and habitat assessments will be performed during the seasonal low-flow time frame (July-October). Data to be collected and assessed are: water and fish tissue samples for laboratory analysis, in-situ water chemistry, channel morphology data, fish community assessments, macroinvertebrate community assessments, and habitat assessments. The results of this program will further contribute to the Indiana 305(b) Report and subsequent section 303(d) list of impaired streams, the Indiana Fish Consumption Advisory, as well as provide for support of the Environmental Performance Partnership Agreement (EnPPA), the Unified Watershed Assessments (UWA) and the development of biocriteria for Indiana's surface waters.

Program Participants

This program will be achieved by the sampling efforts of the Surveys and Biological Studies Sections of the Assessment Branch, and through support of the National Health and Environmental Effects Research Laboratory in Corvallis, Oregon.

Program Description

Media:	Surface Water; rivers and streams
Study Area:	Statewide (in targeted basins based on a five year rotating basin cycle)
Site Selection Type:	Probability-based sampling sites are selected by a representative stratified random draw according to stream order.
Sampling Sites:	Water chemistry will be collected at 50 sites within each of the targeted basins. Biological data will be collected at 42 sites within the West Fork White River Basin and 30 sites within the Patoka River Basin.
Sampling Frequency:	Water chemistry to be sampled three times during sampling time frames. Biological sites to be sampled once during sampling time frame.
Data Collected:	Water Chemistry, Fish Tissue, Fish Community Assessment, and Habitat Evaluations

Program Product(s)

- ▶ Report: Statistical Analysis by Basin and Ecoregions of the Water Chemistry Analytes in the West Fork White River and Patoka River Basins
- ▶ Report: Assessment of the Fish Communities of the West Fork White River and Patoka River Basins.

Technical Notes

WATER CHEMISTRY PARAMETERS		
PRIORITY METALS	ANIONS/PHYSICAL	NUTRIENTS/ORGANICS
Arsenic	Alkalinity	TKN
Cadmium	Total Solids	Ammonia-N
Chrome(III)	Suspended Solids	Nitrate-Nitrite-N
Copper	Dissolved Solids	Total Phosphorus
Lead	Sulfate	TOC
Mercury	Chloride	Cyanide-Total
Nickel	Hardness	Cyanide-Free
Selenium		COD
Zinc		

FISH TISSUE PARAMETERS			
GENERAL	PESTICIDES	PCB's	METALS
% Moisture	Pesticides	Total PCB's	Mercury
% Lipids			Cadmium
			Lead

Contact Information

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